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ESSAYS

ON

AGRICULTURE:

OCCASIONED BY READING

MR. STONE'S REPORT

ON

THE PRESENT STATE OF THAT SCIENCE

IN THE

COUNTY OF LINCOLN.

BY

A NATIVE OF THE COUNTY.

Ye generous Britons venerate the Plough:
———— hence Britannia sees
Her solid Grandeur rise.———

THOMSON.

LONDON:

PRINTED FOR THE AUTHOR BY J. PLYMSELL;

AND SOLD BY W. RICHARDSON, CORNHILL; AND J. SCOTT, NO. 36, PADDINGTON STREET, PORTMAN SQUARE.

1796.

Price One Shilling and Sixpence.

[*Entered at Stationers' Hall.*]

MVSEVM
BRITAN
NICVM

PREFACE.

PERHAPS it will ſoon be a bleſſing to this nation that Agriculture is at laſt become a favourite, and even a faſhionable ſtudy. If the preſent laudable and public exertions for the improvement of this ſcience in general, and for the good of the labouring poor in particular, ſhould receive any aſſiſtance from this inſignificant attempt to promote the public good, it would gratify the ambition of the author's mind, more than all the external diſtinctions of the univerſe could. As to the manner of this work, he wiſhes he had been able to do the ſubject more juſtice; but the author's chief endeavour was to write in ſuch a way as to be underſtood. And in reference to the matter he aſſures the reader, that if he had not thought it in ſome meaſure worth underſtanding, he would not have publiſhed it. Now that it is publiſhed, he only ſolicits, that the different ſubjects may be well

 conſidered,

conſidered, and with that candour, which the firſt attempt of one who was brought up, not a writer, but a farmer, ſeems almoſt to demand. Except Mr. Stone's, the author has never read but one ſmall octavo anonymous book upon the ſubject; what he has written is therefore the reſult of his own obſervations, and has never before met the public eye. So that beſide the acknowledged imperfections, ſome of the ſubjects being only juſt mentioned to induce abler heads and pens to take them up, there are, no doubt, many errors and inadvertencies to be found in it; and if they be properly pointed out, the author will pride himſelf in confeſſing and retracting them, as he can ſafely ſay, that the greateſt happineſs he has is to diſcover truth, and whoever will furniſh him with it, even by expoſing the author's ignorance, ſhall have his thanks.

He would here cloſe his Preface, did he not think ſome apology neceſſary for publickly noticing a work which has never been publiſhed. Mr. Stone's Report was put into the author's hand, with a general requeſt from the Board of Agriculture prefixed, that ſuch

ſuch obſervations as might occur on reading, might be written in the margin, and the Report returned. The author endeavoured to comply with this requeſt, but ſoon found it impoſſible in this way to methodize and give reaſons for his opinions; and as the ſubject appeared of ſuch public and general concern, after a deal of conſideration he determined upon a ſeparate publication.

TABLE OF CONTENTS.

Page.

DRAINAGE 9
Incloſing 17
Houſes and Crew Yards, and the laying out of Farms 29
Labourers 32
Soils 36
Arable 38
Paſturage 46
Live Cattle 53
Wood 56
Quitting and entering upon Farms 58
Sea Ports 59
Victualling Office 60
Manufactories 61
Agricultural Societies . . . . . ib.

INTRO-

INTRODUCTION.

THE ſcience of Agriculture is perhaps the nobleſt and moſt valuable of any. It not only ſupplies mankind with many of the comforts and elegancies, but likewiſe with all the neceſſaries of life. The ſubject divides itſelf into two parts, which perhaps the word Agriculture does not ſufficiently expreſs; nor do I know any word which does. However, to be underſtood, and not criticiſm upon words, is the deſign in this obſervation.------The two parts then are---1ſt, Tillage, or Agriculture, properly and ſtrictly ſo called: 2dly, Paſturage, which, though included in the general term Agriculture, is certainly a diſtinct thing from Tillage. The latter means land cultivated by the arts of the huſbandman, for the production of ſeveral articles which cannot be produced without cultivation, particularly corn. The former, or Paſturage, lies uncultivated, in a ſtate of nature, and is appropriated to the production of cattle. Perhaps no other county in Great Britain enjoys ſo peculiar a variety of conveniencies for the production of theſe two univerſally neceſſary articles,

cles, as Lincolnſhire. I ſhall make uſe of Mr. Stone's words as to the production of corn.* "Every ſoil in the united kingdoms may be found in this county in conſiderable quantities, from the ſharpeſt ſand and lighteſt moor, to the ſtrongeſt clay, in all its various mixtures and qualities." And as to paſturage, it is well known that it is equally ſuitable for breeding, rearing, and feeding all the ordinary kinds of cattle. What is therefore ſaid on the permanently improving of the arable and paſturage of this county, will be equally applicable to every other part of the kingdom. This general applicability of the ſubject extends itſelf ſtill farther: the maritime ſituation, the bad ſtate of drainage and roads, the evident want of manufactories, ſea ports, &c. in this county, render an exhibition of the beſt means of improving it, almoſt as comprehenſive in its ſubjects, and univerſally applicable, as if it had been profeſſedly written on the general agriculture of the kingdom, inſtead of that of the county of Lincoln only. With this remark we will conclude theſe preliminary obſervations, and enter more immediately into the ſubject, as ſtated in the ſubſequent pages.

* Page 12.

ESSAYS

ESSAYS
ON
AGRICULTURE.

DRAINAGE.

THE county of Lincoln exhibits a very uneven ſurface. Along the ſea-coaſt is a champaign or level, including the two deſcriptions of land called the Low Marſhes and the Fens. Immediately above this is a ridge of riſing ground, denominated the Middle Marſhes. Theſe again are bounded on the ſide fartheſt from the ſea by land higher than they, which has obtained the name of Wolds.

Now it would be an eaſy thing to drain this country, if there were a regular deſcent from the Wolds to the ſea But this is not the caſe. The loweſt land, which is in ſome parts of the Fens, lies ſeveral miles from the ſea; and in many inſtances where this does not occur, the champaign is ſo flat, that in wet times a proper fall for the waters,

which pour in torrents from the hills, cannot be had; whereby they are not readily enough conveyed to their outfalls, but burſt the banks, and do a great deal of injury to the country.—Theſe circumſtances make the drainage of this diſtrict a very difficult buſineſs.

But let us here conſider what we mean by the general term—*drainage*. We ought by no means to confine it to preſerving our land from being overflowed, though, no doubt, this is the primary object. Water is a very valuable element, and we may turn it to more uſes than we are accuſtomed to do, and greatly extend the uſes we do make of it.

There are five objects which we ought to have in our minds when we are conſulting about drainage: becauſe, as far as poſſibly practicable, they ought all to be included in our plan on this head. Some of theſe are of greater and ſome of leſs utility. Care then muſt be taken not to prejudice the more beneficial parts by adopting the inferior ones. In order to avoid this, a *comparative* eſtimate of the benefits to be expected from them muſt determine which is to be preferred, and which rejected. Local circumſtances may in ſome caſes make a difference, but

in

in general, when they cannot be united, they ought to give place one to the other in the following order; the moſt important being placed firſt, and deſcending regularly to the moſt inconſiderable.

The five objects then in drainage are, 1. Preventing the land from being overflowed in wet ſeaſons.—2. Retaining water againſt dry ones.—3. Navigable canals.—4. Water meadows.—5. Lakes and decoys, &c. on land that will not pay for draining.——I ſhall juſt make a few general remarks upon each article.

Firſt, Preventing the land from being overflowed.—We need not ſay any thing to enforce the neceſſity of doing this. I ſhall therefore only give a general hint as to the *manner* of doing it. Wherever the country requires draining, it ought to be divided into diſtricts; not of diviſions and ſub-diviſions of Marſhes and Fens, as Mr. Stone recommends: * but each diſtrict ought to extend *lengthwiſe with each drain*, whether the drain be permitted to keep its old courſe, or a new one be opened. The diſtrict ought to begin at the point of each drain where it *firſt* overflows its banks, and ought to be continued

* Page 88.

quite to the outfall of that drain. So that the gentlemen who have the management of drainage may have the whole object in their view at one time; may, as it were, place themſelves on a riſing ground, and view the whole courſe of each ſtream, from the ſource to the outfall, and from thence take their plans for ſafely conducting that water all the way, without ſuffering it to injure any of the intermediate country. They will thus be able to take and execute their plans for the public good, and not be tied down to partial meaſures. Indeed, Mr. Stone corroborates this idea.* "It is a matter of great public concern, that in every ſcheme of drainage, the interior parts of the country ſhould be brought into the meaſure at the outſet; for, by conſtructing works for drainage neareſt to the outfall, in the firſt inſtance, they are often found afterwards to be incompetent to effect the general good; by reaſon of which, an after-expence is incurred, of which more than a moiety might have been ſaved in the firſt inſtance, as well as the general improvement of the country effected, inſtead of a partial one."

Second, Retaining water againſt dry ſeaſons. The well-known mortality, which in dry ſeaſons

* Page 49.

often

often afflicts both man and beasts in some parts of our Fens and Marshes, shockingly demonstrates the necessity, or at least the propriety, of attending to this division of drainage. The water in these districts is frequently so scarce, that the inhabitants have a mile to fetch it for the common uses of the family; and when procured, it cannot be used till filtrated through a cloth, because it is as green as grass with the innumerable animalculæ with which it is impregnated, and on account of its stagnant putrid state: it is also exceedingly offensive both in taste and smell, especially to strangers, before it is boiled, and not very good after. These evils are certainly not so frequent or so great as they have been, because the drainage is rather better now than it formerly was. But Mr. Stone is very greatly mistaken when he says,* "At this time the inhabitants of the county have no dread of their health being impaired in shifting their abodes, even at advanced periods of life, from the upper parts called the Wolds, to the lowest part of the Fens and Marshes."—But mistakes, arising from his want of local knowledge of the county, frequently occur in his Report. As to the means of retaining water against dry seasons, there are three ways of doing it—in the common drains—

* Page 13.

by

by ſprings—and, laſtly, by pits. Now, though the common drains are not capacious enough to contain all the water which is hurried into them in wet times, yet in dry ones they are apt to choak up with ſoil, from the want of water to ſcour them out; therefore we ought in dry ſeaſons to rob them as little as poſſible. As to ſprings, where water in ſummer is bad or ſcarce, they ought to be ſought for and procured, either by boring or digging, whenever they poſſibly can be found, as they are, in ſuch ſituations and ſeaſons, the very beſt ſupplies of freſh water. But where theſe cannot be had, pits ought to be formed—filled with water in wet times, and preſerved from cattle running into them in dry ones. In making theſe pits, if the ſtrata through which they are dug be looſe, there are methods of lining them, to make them retain their contents, which ought to be had recourſe to. They ought to be ſo placed, that in wet ſeaſons they will fill of themſelves, fenced from cattle, and planted round with wood, to prevent evaporation.

Third, Navigable canals.—I only mention them here for the ſake of method. Their utility will not be doubted; and conſiſtently with other branches of drainage ought certainly to be promoted. As to the manner of forming them, I have

have no obſervation to make; this being ſufficiently underſtood.

Fourth, Water meadows.—Method is my only reaſon for here mentioning this article too.

Fifthly and laſtly, Lakes and decoys, &c. on land that will not pay for draining.—There are ſeveral parts of the nation which would not pay for draining. Perhaps, were the queſtion agitated, ſome parts of the Fens of Lincolnſhire would be determined to be of this deſcription. Be that as it may, wherever the circumſtance occurs, form theſe parts into lakes for fiſh, make decoys for wild fowl, plant them round with oziers for baſketing, &c. &c.

I ſhall conclude the ſubject of drainage with remarking on a miſtake or two Mr. Stone ſeems to have fallen into on this ſubject. We ſhall frequently find as we proceed, that Mr. Stone likes to contraſt his own knowledge with the ſuppoſed ignorance of country people; but the reſult is not always in his favour. He ſays,* "A falſe principle in drainage, by long cuſtom, is eſtabliſhed, viz. not to open or cut ſtraight the ſewers and drains neareſt the high land, leſt the

* Page 50.

water

water ſhould come down too rapidly, and be forced over the banks," &c. Now the fact is, that theſe drains originally formed their own courſes. We always find, that theſe curved ſewers and drains run on the loweſt parts of vallies or low land, occaſioned, no doubt, by the natural fall of the water from the oppoſite hills, and the ſprings and fountains higher up the country. Beſides, their curves and angles are ſo exceedingly irregular, as fully to prove that there was no *deſign* in their formation, but the water was left intirely to take its own courſe, and form its own channels. We likewiſe find, that in low flat countries, where art is uſed in drainage, they are ſtraighter; whilſt upon the Wolds, and the higher parts of the Middle Marſhes, where little or no attention to drainage is, or ever has been, neceſſary, they are the moſt curved, always growing ſtraighter in proportion to the neceſſity there is for attending to drainage. So that it often happens, that when they are moſt inflected, it does not ſignify a pin to the neighbourhood whether they be ſo or not; yet, no doubt, there are ſeveral inſtances in the Middle Marſhes where they ought to be made ſtraight: but in general, wherever we find drains crooked, they are naturally, not artificially ſo.

Mr.

Mr. Stone repreſents the *Middle Marſh* * as "not ſubject to be overflowed." Now this is a moſt unaccountable miſtake.——Indeed, Mr. Stone frequently contradicts what he here aſſerts. He tells us,‡ they "ſuffer conſiderably for want of drainage, which (adds he) is the frequent cauſe of the rot in ſheep, and the dropſy, pheltrie, and various other diſeaſes in neat cattle and horſes." That ſome of the commons in this deſcription of land "in their preſent ſtate are chiefly covered with water:"—and even ſpends pages in telling us how they ought to be drained.

INCLOSING.

INCLOSING has certainly very much benefited the public, and has improved the ſtate of the land, as well as the face of the country. To ſatisfy ourſelves of this, we need but compare the appearance of the incloſed parts of the nation with that of the uninclоſed ones, and then further extend the compariſon by conſidering what ſort of appearance the whole nation uninclоſed would have, compared with its preſent aſpect.

* Page 14. ‡ Page 29.

Nor is appearance the only improvement arising from inclosing: the convenience and utility of each person having his lands entirely to himself, every other person being excluded by law from interrupting him in his possessions, or in his manner of cultivating them, must be evident to every one, and are of themselves indubitably very great advantages, of which both the individual and the public partake.

But in order the more clearly to perceive the advantages resulting from inclosing, let us take a short view of the present evils of uninclosed commons. Mr. Stone, speaking of the *Middle Marsh* commons, particularly those of the Isle of Axholm, says,* "On account of the general wetness of these commons, and their being constantly overstocked by large occupiers of contiguous estates, or in such seasons as the pasturage is desirable, in summer to ease the inclosed land, the cattle and sheep necessarily depastured thereon at all seasons, being those of the cottagers, who are for the most part destitute of provisions for them in winter, are always unthrifty, and subject to various diseases, which render them very unprofitable to the occupier."——Under the title *Lower Marshes*,

* Page 29.

speaking

ſpeaking of the ſtate of Long Sutton commons, previouſly to their being incloſed, he ſays, *— "Farmers turned upon the commons ſeven or eight hundred ſheep in a ſeaſon, and thereby eat up the poor cottagers' rights."——Again, under the title *Fens*, he tells us,‡ "The farmers in the neighbourhood having common rights, availing themſelves of a fine ſeaſon, turn on ſeven or eight hundred ſheep each, to eaſe their incloſed land, whilſt the mere cottager cannot get a bite for a cow."—In another place he tells us, that commoners who are too poor to ſtock with their own cattle, will, under colour, and in their own name, let rich farmers ſtock the commons, who have no common right whatever. And again elſewhere he adds, theſe practices are carried ſo far, that horſes are ſaid to eat the hair off each others tails and manes, and even the gooſe-dung off the land.

Here we ſee that the rich and poor mutually agree to plunder the common, and injure each other in their rights. Now incloſing removes all theſe evils; but ſtill there are evils reſulting from incloſing, which to many individuals greatly overbalance the advantages they receive from it, and detract very conſiderably from the public benefit

* Page 46. ‡ Pages 22 and 23.

that otherwiſe might ariſe from incloſing, and therefore well deſerve to be inquired into.

From the foregoing ſtatement it is evident, that there are two deſcriptions of commoners. We ſee that one has farms, and paſtures, and conveniences, independent of the commons; to which, in winter and other unſeaſonable times, they take their cattle, and keep them healthy and ſtrong till ſummer returns, and the paſturage of the commons once more becomes deſirable, and then in they pour them, and reap the benefits of the good, as before they avoided the evils of the bad ſeaſons.—But can the other deſcription of commoners do this? No: we ſee that their little all muſt abide the blaſt; for they have no aſylum to take them to; and when the fine ſeaſon returns, the commons are ſo overſtocked by their richer neighbours' cattle, that their own remain unthrifty, diſeaſed, and unprofitable.

But in order to inveſtigate this ſubject ſatisfactorily, we muſt enquire ſtill further into it; becauſe were the compariſon to ſtop here, it would ſeem as much, or more to the advantage of the poor than the rich, that the commons ſhould be incloſed, which is by no means the caſe: for though the poor man has ſo much the diſadvantage in

ſtocking

ſtocking theſe commons, yet he lives *entirely* by what he gets off them;—whilſt the other, who has ſo much the advantage in ſtocking, is at beſt only *accommodated* thereby.

But how does the poor man live intirely by what he gets off the commons? Not by ſtocking them: he is overpowered in his endeavours on this head: but by his ſuperior induſtry, in fiſhing, fowling, getting fuel, and a thouſand ſuch trifles, which his poverty obliges him to attend to, but which are yet excluſively his own, ſo long as the commons remain unincloſed; for his richer neighbour will not condeſcend to ſuch purſuits. I ſay, the poor commoner, by ſuch *extraordinary* means and purſuits, lives—lives independently; and, in ſpite of the foreſtalling practices of his neighbour, lives plentifully.

Now let us conſider how the ſtate of theſe two deſcriptions of people is altered by incloſing, and then how the community is affected by that alteration.

The rich man's property is altered for the better, becauſe he gets a full equivalent for his commonable right changed into a better ſituation; inaſmuch as incloſed is more convenient for cultivating

vating than unincloſed land, and his caſual accommodation is thus changed into permanent property, and by attending to the drainage, &c. will now always be ready for uſe. On the contrary, the poor commoner's ſtate is made worſe; becauſe incloſing deſtroys all thoſe extraordinary means by which he lives; and in the general diviſion of land he is allowed only an equivalent for the benefits accruing to him from *ſtocking* the common, without getting any conſideration for thoſe extraordinary advantages ariſing to him from the commons in their open ſtate, but which, by incloſing, are abſolutely deſtroyed; and his former unſocial but noble and independent way of living being at an end, he is compelled, upon his little diviſion, to commence little farmer; or rather half a farmer and half a labourer, his own buſineſs not being ſufficient to maintain him without labouring for others; and a man who is half a farmer and half a labourer, is at once, without deſigning it, either a bad labourer or a bad farmer; for farming is a buſineſs which requires conſtant attention. So that whilſt the little farmer is laudably endeavouring to earn a few ſhillings in his neighbour's field, and amongſt his neighbour's cattle, his own, though not large or numerous enough to find him conſtant employ, is, perhaps, loſing him pounds, from the want of his preſence.

ſence. Thus, while little farmers are able to bear leſs, they are ſubject to more difficulties and dangers than great ones.

The author has often obſerved, that little farmers, by this double kind of employ, are the greateſt ſlaves in the farming buſineſs. He has known them work hours both at morning and evening for themſelves, before and after the mere labourer went or came from his buſineſs; beſides often living very indifferently: and thus, in order to avoid the appearance of poverty, have experienced all the moſt biting effects of its reality. Beſides, when ſmall farmers break, credit being leſs known in the lower than the higher walks of life, they are very ſeldom able to get reinſtated in buſineſs;* and then their premiſes are frequently ſold to larger proprietors,—their houſes

* When conſidering the peculiar hazard of failing little farmers are in, and the almoſt impoſſibility of again getting into buſineſs, and the conſequent increaſe of great farms, which are great evils, I have frequently been induced to aſk myſelf this queſtion: If labourers were well provided for, (See Eſſay—LABOURERS,) would it not be a ſecurity againſt monopolizing of farms, and altogether tend to benefit the community, if the ſize of farms were ſo regulated as that we ſhould have no very ſmall, as well as no very large ones? To which I muſt confeſs, that a proper anſwer has never ſuggeſted itſelf to my mind; and is here only propoſed to the reader as a thought, which perhaps is not altogether unworthy his conſideration.

tumble,

tumble, or, to ſave expences, are pulled down,—and their little farms get added to larger ones.—This is ſuppoſing them to be proprietors of their own farms; but when the commoners happen to be only tenants, which is frequently the caſe, the landlord, on incloſing, not uncommonly turns ſeveral of them out, to convert his ſmaller diviſions into larger farms.

Thus, incloſing upon miſtaken principles, decreaſes the number of farmers and farm-houſes, and in proportion to this decreaſe tends to increaſe the ſize and monopolizing of farms, or elſe the quantity of waſte land. It likewiſe adds to the number of our poor, and conſequently increaſes the burdens of the public.

I do not think that the juſtice of allowing the poor, on incloſing, an equivalent for fiſhing and fowling, &c. ever occurred to any Commiſſioners, though it is evident that incloſing deſtroys theſe, and that theſe ſupply them with the chief means of ſupporting themſelves by honeſt induſtry. Then how can we be ſurprized at the poor ſo terribly dreading and violently oppoſing incloſures as they have been known to do in fiſhing and fowling countries? It is well remembered by many, how exaſperated they were in the neighbourhood

bourhood of Boſton, a few years ago, when they could only be quelled by military force. But if added to this, what I would call inadvertent injuſtice, the ſoil itſelf ſhould in future be divided unfairly, and even the ſecondary benefit, that which ariſes from *ſtocking*, ſhould likewiſe be infringed by incloſing, what conſequences may we not then expect?

This reflection was ſuggeſted by reading in Mr. Stone's Report ſuch ſentiments as the following.—Speaking of the Fens, he ſays,* "It ſeems reaſonable that the commons ſhould be allotted to the proprietors of the landed property, who have, time immemorial, poſſeſſed them by the depaſturage of ſuch cattle in ſummer, as they could maintain upon their incloſed land in winter, in a proportionate ratio with the owners of commonable meſſuages, cottages, &c. It appears perfectly abſurd that commons ſhould be divided and allotted to cottages, meſſuages, and toftſteads only, to which little or no land is attached, and by the proprietors of which, the commons could not, in any ſeaſon, be largely and profitably occupied."—Take another quotation from him upon the ſame ſubject. After giving what he calls the popular mode of dividing and incloſing commons,

* Page 21.

which, by the bye, is in ſome meaſure fanciful, he adds,* "This mode of dividing the commons ſeems to be a compromiſe to prevent further oppoſition, and not adopted altogether upon a principle of equity; becauſe the owners of land have certainly, time immemorial, occupied the commons in a larger extent, and in proportion to the ſtock they kept in winter: whilſt the mere cottagers, *(could not get a bite for a cow,*‡) for the want of proviſions for their cattle in winter, as well as from the general unprofitableneſs of the ſituation and mode of occupancy, have kept a much leſs proportion of ſtock than the occupiers of meſſuages and lands."——In addition to theſe abſurdities, Mr. Stone ſays, that the commoners who live fartheſt from the common, ought on that account to have leſs ſhare in the diviſion.

The reader is requeſted to compare the ſentiments contained in theſe quotations, with thoſe which he finds on p. 18, 19, and to conſider how it was poſſible for the ſame man in the ſame work to be author of them both.

But there is one very material circumſtance which Mr. Stone has on this ſubject thought proper to omit; which is, that upon theſe Fens each

* Page 31. ‡ Pages 22 and 23.

commoner,

commoner, whether his meſſuage be conveniently or inconveniently ſituated, and whether he be rich or poor, has an unlimited, and therefore an *equal* right. Then why would Mr. Stone, becauſe a man's houſe is by accident badly ſituated, or becauſe he may be accidentally poor, take away, on incloſing, part of his undoubted and equal rights, and give to his neighbour as a permanent property, what before he enjoyed only by foreſtalling; merely becauſe he happens already to be rich, or becauſe his houſe happens to be nearer the common; by which accidental advantages, more than by the exerciſe of any principles of equity, he has, time immemorial, been able to enrich himſelf at the expence of his neighbour? Mr. Stone does not ſeem to conſider, that theſe advantages and diſadvantages are purely extrinſic and accidental, and have nothing to do with their rights, which are equal, and ought, on principles of equity to be conſidered in this light on a diviſion. Indeed Mr. Stone's opinions are ſo completely abſurd, and the principles ſo extremely unjuſt, that I am not without ſome ſuſpicion that his detached ſentences and unconnected method of writing may have led me to miſtake his meaning; and therefore, if the reader ſhould have an opportunity, I would recommend him to conſult Mr. Stone's Report itſelf.

I will conclude this ſubject by recommending the following idea of Mr. Stone's, relative to making incloſing a general concern.

Speaking of the Eaſt, Weſt, and Wildmore Fens, he obſerves,* that "The expence of an application to Parliament, and obtaining for apportioning and dividing the commons, belonging to forty-ſeven pariſhes; and the after-diviſion of ſuch apportionments amongſt the commons of each reſpective pariſh, might probably involve the proprietors of the whole in the enormous expence of forty-ſeven Acts of Parliament. The general act for dividing theſe commons, by the uſage of the Houſe, would be charged as forty-ſeven acts, and pay the fees accordingly:—a very ſufficient reaſon for the proprietors dreading the expence of the meaſure of incloſing the Fens; and no inconſiderable proof of the neceſſity of a *general* act to promote the incloſure of *all* commons, common fields, common meadows, and waſte lands in the united kingdoms, under ſuch regulations and reſtrictions as the wiſdom of Parliament might deviſe."

* Note, page 20.

HOUSES AND CREW YARDS, AND THE LAYING OUT OF FARMS.

THIS ſeems to be a branch of incloſing, and therefore I have placed it immediately after that title. I adopt Mr. Stone's ideas, when upon the ſubject of incloſing he ſays,* "Make the allotments as nearly as poſſible in ſquares, conſidering the centrical ſituation of farm houſes and neceſſary buildings." And again, ‡ "Surely it would be more deſirable for all parties intereſted, to have the diſtant parts of the pariſhes to be incloſed, ſettled by Commiſſioners for the expence of new buildings in central ſituations; whilſt the proprietors whoſe eſtates are allotted to their houſes and buildings in the villages, would have all their lands contiguous, at a rate proportioned to the advantages ſo to be derived."—However, a very conſiderable object in the ſituation of a farm houſe is to place it ſo that it can be well watered at all times. Water is ſo valuable an article, that the conveniency of it has frequently induced people to build houſes and crew yards in ſituations very inconvenient in other reſpects. I know Mr. Stone, under the title Wolds, § ſays, "The farm houſes are generally on the loweſt ſituations,

* Page 80. ‡ Page 43. § Page 40.

originally

originally placed there with a deſign to ſhelter the inhabitants from the cold winds." But the conveniency of water, which is moſtly on the loweſt land, was the real and chief inducement to this choice of ſituation.——In addition to its being placed in the center, and being ſupplied with water, care ſhould be taken to place it upon a hill; becauſe, as Mr. Stone juſtly obſerves,* "the moſt laborious part of the regular proceſs upon a farm, is drawing out the manure from the farm yard, which is eaſieſt performed upon ground that ſlopes from them."—As far as theſe objects can, they ought to be united.

The houſe for the ſake of neatneſs ſhould be at a ſmall diſtance from the crew yard, and ſhould have a good garden adjoining it. The ſitting room ought to front immediately upon the yard, that the farmer's buſineſs may be in his view as much as poſſible. The houſe, and all the large yard buildings, ſuch as barns and ſtables, ſhould be placed at the eaſt, weſt, and north ſides of a large ſquare, with a gateway or two left in the middle of each ſide. The ſurface of the ſquare ſhould be higheſt on the north, and loweſt by a regular deſcent on the ſouth ſide. And acroſs the bottom of the ſquare ſhould be a large hollow, with a

* Page 83.

firm

firm bottom, capable of retaining water, which ſhould be acceſſible to carriages, and which ought to contain a conſiderable quantity of ſtraw, or ſtrawy manure, to receive the ſoke of all the crews which ſhould be communicated to it from the crew yard; the ſurface of which being divided into convenient crews, ſhould be rounded up into ridges, with gutters on each ſide like a paved ſtreet; which gutters ſhould run ſtraight from north to ſouth, and diſcharge their contents into the hollow on the ſouth ſide of the ſquare. Thus the whole ſoke and eſſence of the crew manure would be preſerved, and the cattle at the ſame time would be provided with dry, warm, and comfortable lodgings.

Water ſhould be diſperſed about all theſe buildings and crews, that no ſtock ſhould have to go out of the ſquare for it, by which their manure would be loſt. Behind the buildings ſhould be made ſtack yards, which ſhould be dry and clean, and the carriage ways in and out ſhould be ſtraight and eaſy. The houſe ſhould be placed either on the eaſt or weſt ſide of the ſquare. The higheſt buildings, for the ſake of ſhelter, ſhould be placed on the north ſide; and the buildings which are intended to winter cattle in, ſhould have holes through the walls into the ſtack yards,

about

about five or ſix feet from the ground—that is, juſt above the racks or mangers. Slide doors ſhould cover theſe holes, through which cattle ſhould be foddered immediately off the ſtacks; and if water could be made to run by ſpouts and troughs into the ſtall of each animal, it would be a great convenience. All theſe yards and buildings ſhould be ſurrounded by old ſward land, for the ſake of neatneſs, and eſpecially for the grazing of milch cows and the teams, &c. which ought to be near home.

The remainder of the paſturage ſhould lie at the extremities of the farm, as the arable ſhould be as near the home ground and crew yard as poſſible.

LABOURERS.

THE laborious part of the community form the baſis of the ſtate; for whoever does not labour for his own living, is only a penſioner on the induſtry of others. Of how much conſequence is it then to the public, that our labourers, who are immediately employed in procuring the neceſſaries of life, be well provided for?

Every

Every labourer ought to have as much land at a moderate rent, as will enable him to keep well, at all times of the year, one cow; and a good garden, by which he may keep a pig or two, and rear a few lambs on cow's milk. And whenever a labourer's family increaſes to half a dozen children, he ought to be enabled to keep two cows; and to theſe ſhould be added, a comfortable dwelling-houſe, a cow-houſe, a calf-houſe, and a pig-ſtye.

There is no ſubject treated of in Mr. Stone's Report does him more credit than what he ſays about labourers and poor. But though creditable to his humanity, I apprehend he has fallen into a miſtake about them. He ſeems to accuſe them for not buying their own corn, and baking their own bread. His expreſſion is,* "they have not *forecaſt* to do it:" while the fact is, that they have neither money nor fuel to enable them to do it. And here I am obliged to mention another difficulty which the poor meet with in this reſpect, becauſe truth, juſtice, humanity, and the good of the public require that it ſhould be mentioned—I allude to the well-known circumſtance, that many *great* farmers will not ſell the poor corn, even for ready money. The chief rea-

* Page 25.

ſon for this ſeems to be, that, beſides the additional trouble, it is too much like retailing their commodities; and they like to do buſineſs and to appear as wholeſale dealers.

It would certainly be a great advantage to the poor *could* they bake their own bread; and if the mills which Mr. Stone recommends* prove themſelves to be equal to their intent, the poor ought to be accommodated with them; and in addition too with caſt-iron ovens, to be ſet at the back of the ſame fire which is uſed for all the other purpoſes of the family, as the original price of thoſe ovens would ſoon be ſaved in fuel, which the poor are often almoſt as hard ſet to procure as food.

As to the price of labour, it ought not to be regulated merely by the ſeaſon of the year, and by the price of bread; it ought to be proportioned at the different ſeaſons of the year to the medium price of *both wheat and butchers' meat.* For a working man cannot be ſaid to live well without *both*, and butchers' meat may be very dear when wheat is at the medium price, or even very cheap.

* Page 45.

That

That ſome regulation of this ſort is neceſſary, will be evident to any one who conſiders the progreſſive increaſe of our taxes, and conſequent fluctuation in the price of the neceſſaries of life, which makes what was a good day's wage twenty years ago, a ſtarving one now; and perhaps we may have as much alteration in theſe reſpects the next twenty years, as we have had the laſt.

The above hint reſpecting the regulation of the price of labour is founded upon a principle which tends to prevent combinations of either poor or rich, on account of the price of labour or proviſions; becauſe it is evident, that whatever falls the price of one, raiſes the price of the other. This mode of regulation would likewiſe leave thoſe capable of ſuperior exertions an opportunity of getting an adequate reward for their extra labour, as they would ſtill be at liberty to do work by the quantity, inſtead of working by time; and thoſe not capable of ſuch exertions would by it be preſerved from ſtarving.

As to the principle of the price of labour being left to find its own level, the preſent ſtate of labourers proves, that its operation will not prevent the labourers' ſufferings and miſery. And ſurely our chief care on this ſubject ought to be, to

adopt *preventatives*. We therefore concluſively argue, that this principle as a preventative having proved itſelf inſufficient and defective, ſome *other* principle ought to be ſubſtituted; eſpecially as we cannot reaſonably depend upon it as a reſtorative from that miſery which it has proved itſelf incapable of preventing.

I am confident that it is a very ſerious thing to the intereſts of Agriculture, and conſequently to the public, that our labourers be taken a deal better care of than they are at preſent. Both the cultivation of our land and the ſtate of our population are materially affected by it.

SOILS.

IT may be neceſſary to introduce what I have to ſay on Arable and Paſturage, by a few general obſervations upon Soils. The unevenneſs of ſurface noticed in the Eſſay on Drainage, and the variety of ſoils pointed out in the Introduction, will here naturally occur to the reader's recollection, which makes their repetition unneceſſary. Some ſoils are beſt for arable, whilſt others are beſt for paſturage; of the former, ſome again are moſt ſuitable for oats and rye, others barley and turnips,

turnips, and a third ſort for wheat and beans. Of thoſe beſt calculated for paſturage, ſome ſuit breeding, others holding, and a third kind feeding ſtock. The ſeveral productions, whether corn or cattle, which each of theſe ſoils brings neareſt to perfection, ought to be moſt cultivated thereon, and theſe productions are the beſt criterions to determine to what uſe to apply the ſoils. For though a good judge of land, will, on inſpection of the ſoil only, be able to determine pretty nearly to what uſe it ought to be applied, yet compariſon of the productions themſelves is the more certain way of knowing which is the beſt mode of occupying the land.

Very light ſoils are far better adapted to paſturage than to arable; for ploughing and harrowing, &c. increaſe their lightneſs, ſo that they in this ſtate do not long retain tenacity enough for the crops with which they are ſown, and the manures which are laid upon them are ſoon waſhed through by the rains; whilſt the roots and matted nature of natural graſs bind the ſuperfices of light ſoils, and have a tendency in ſome meaſure to counteract the bad effects of their lightneſs. There is a ſoil which is the reverſe of this, being too ſtiff; and as the others are beſt in paſturage, for the very ſame reaſons this is beſt in tillage, the

the frequent ploughing, &c. having a tendency to make it mellow.* A ſoil which is not properly adapted to arable ſhould not be applied to that uſe, becauſe bad arable coſts as much, or more, cultivating, as good; whilſt paſturage is in general only expenſive in proportion to its quality—the better land, the better ſtock it requires; and, *vice verſa*.

ARABLE.

THE cultivation of Arable is nothing more than gardening upon a larger ſcale. But how frequently do we ſee gardens very productive in neighbourhoods where the arable is wretchedly barren and unprofitable? Hence we cannot but conclude, that the management which makes one barren, if applied to the other would make it ſo too; and, *vice verſa*. Perhaps theſe obſervations tend to reduce the farmer's chief buſineſs to the two common operations of weeding and manuring, for what more than theſe does the gardener do? Then as in gardening, ſo in farming, the two indiſpenſible objects of attention are keeping the land clear of weeds; and, in addition to this,

* I am perſuaded, that theſe two ſoils would make the very beſt manures for each other.

never

never ſowing it with any exhauſting crop till it is of ſufficient ſtrength to produce it plentifully.

Firſt, as to keeping it clear of weeds, no two vegetables, any more than two houſes, can be in the ſame place at the ſame time. Thus, a crop of corn, even upon land of ſufficient ſtrength, muſt be greatly retarded in its progreſs, if its blades be obſtructed by the tops, and its roots interwoven with the roots of weeds; therefore they ought to be deſtroyed. For though a good crop of corn which is full of weeds may no doubt be conſiderably relieved by pulling them out after the crop is partly grown, yet this is certainly the worſt way of weeding, when compared with that of cleaning the ſoil before the corn is ſown. It is like clearing away the rubbiſh from the ground upon which you mean to build. To kill weeds effectually, ſtubbles ſhould be fallowed in autumn; the winter will ameliorate the ſoil, and cauſe the weeds to grow up in the ſpring; and then when the land is dry, the ſecond fallow will have a double effect—it will kill the weeds, and thoſe weeds in proportion to their quantity will manure the land. Except weeds are made to grow they cannot be killed; and fallowing ſo late as not to kill them, only prepares the land for their concealed ſeeds and roots to grow up with the future crop;

crop; an evil which fallowing early is beſt calculated to prevent: therefore, if land be cloddy through neglect of fallowing early, or any other cauſe, harrowing, though a bad ſubſtitute, ought to be applied.—Now as to manuring, ſo as to keep the ſoil rich.

Manure to ſoils, is like food to an animal. Land which is too weak for the crop ſown upon it, muſt, if I may uſe the expreſſion, ſink under it, and bring the cultivator's expectations to the ground. Manure is beſt applied by always conſuming upon the land the whole of its own productions, or returning equivalents in ſome other kind of manure, for thoſe productions which are taken away. And here it may be neceſſary to remark, that the grain or ſeeds make better manure than the ſtraw makes. This is the reaſon why the dung of thoſe animals, ſuch as pigs, pigeons, &c. which eat no ſtraw, but chiefly live on corn and ſeeds, make richer manure than that produced from thoſe animals which live chiefly on ſtraw, or whoſe dung is moſt mixed therewith, ſuch as ſtable horſes, and common ſtraw crew manures. Give me leave then here to aſk, do not diſtilling and malting, though they enrich the revenue, tend to impoveriſh the nation by depriving the ſoil of its natural and beſt manure? I am ſo convinced they do, that I would adviſe

adviſe gentlemen of landed property in poor countries to erect additional buildings, mills, houſes to winter cattle in, &c. on their eſtates, and induce their tenants to conſume moſt of their own corn in winter by fattening oxen, pigs, &c. &c. I am confident, if the cattle were well managed, it would be the landlords' and tenants' mutual intereſt to do ſo, as they would thereby at all times be able to keep even naturally poor land in good heart. This is peculiarly adviſeable where clays, marls, limeſtone, and different kinds of ſoils and underlays of ſoils, which are excellent manures when properly applied, cannot be had. Some of theſe are cementing, as clays, and ſhould be laid on light ſoils, eſpecially if they have looſe underlays; and the others, ſuch as lime, ſhould be applied to clayey ſoils. But the uſing of animal manure in the way above recommended is far preferable, as it ſupplies the markets with fat cattle, at the ſame time that it increaſes the quantity of corn.

I will conclude the ſubject of manures with two remarks.—Firſt, That crew manure ſhould be turned over ten days or a fortnight before it be carried out. This will cauſe it to ferment, which will deſtroy the ſeeds of weeds that it generally retains.—Second, That the labour of manuring

is for the teams the greateſt of any, and ought therefore to be performed by oxen as much as poſſible, eſpecially as the agility and handineſs of the team is more immaterial in this than moſt other buſineſſes.

The next thing after preparing the land is a judicious choice of crops. Some crops improve, whilſt others impoveriſh the land. The former are conſumed immediately upon the land which produces them, and the latter are cut and carried off the land. That one ſort being thus conſumed, and the other taken off, is the chief reaſon of theſe different effects upon the ſoils which produce them, is remarkably exemplified in artificial graſſes, which, when depaſtured, improve, but when cut for hay impoveriſh the ſoil.* The

* There ſeems to be an exception to this general rule in corn crops, of beans, peas, and lintels, which, though carried off, do very little injury to the land, and when ſown in drills and well hoed, improve it. Mr. Stone endeavours to account for it in the following note, which is certainly ingenious, and may perhaps be right.—"The extreme benefit any ſoil derives from a crop of ſucculent plants, the flowers of which are lateral, and which diſcharge into the ground a part of their juices during the time they are perfecting their ſeed, as a reſerve for the ſupport of future crops: whilſt plants, the flowers of which are terminal, (ſuch are all kinds of grain,) abſorb from the ground all their nouriſhment to perfect their ſeed, which conſequently exhauſts the ſoil." See Mr. Stone's anſwer to Flint, in the Yorkſhire, Nottingham, and Lincolnſhire Gazette, for 17th January, 1795.

number

number of theſe different crops ought to be proportioned to each other, according to the natural ſtrength of the ſoil, and the extraordinary means you may have of ſupporting it. Thoſe which tend to reſtore the land, are in themſelves only crops of conveniency, being but of ſecondary uſe, and may be ſupplied by natural graſs or paſturage. Whilſt the chief of thoſe which exhauſt are indiſpenſible for the uſe of man, and can only be produced by tillage;—theſe are corn. Thus the production of corn is the grand object in the cultivation of arable; and as corn exhauſts, the greateſt difficulty in the tiller's art is to adopt ſuch of the improving crops as may prove the cheapeſt and readieſt reſtoratives to his land, in order to prepare it for the quicker ſucceſſion of corn crops.——Perhaps I need not heſitate to pronounce, that winter vegetables beſt anſwer this deſcription; for beſides being very valuable in themſelves, you may have a crop of theſe, and a crop of corn, in one year, upon the ſame piece of land; and by ploughing and preparing the ſoil according to the directions given above for weeding and manuring, the land will ſuſtain this mode of farming for years; yea, and if naturally good, will improve under it; and if bad, it only wants now and then two of the vegetable crops to one of corn, which is only giving the weak or weedy

ſoils an extra degree of weeding and manuring, according as the caſe may require. And this I muſt take the liberty to ſay is the beſt way of managing arable.

But perhaps ſome readers may here be inclined to put in a claim for artificial graſſes, as reſtorers of ſoils. But theſe when mown for hay impoveriſh the land as much as corn does. When depaſtured, I grant that they are reſtoratives, but not equal to winter vegetables, for theſe as reſtoratives will do as much in half a year as the graſſes will in one, two, three, or more years; ſo that they poſtpone at leaſt one crop of corn, and and rather than deſtroy them before they begin to decline, are generally ſuffered to poſtpone more than one. Beſides, they are not more valuable in themſelves, and conſidering the longer time they muſt be upon the land, are not ſo valuable as winter vegetables.

Now if the chief buſineſs of a cultivator of arable be to produce the moſt corn in the leaſt time, without injuring the ſoil, and if winter vegetables will do as much in reſtoring it in half a year, as artificial graſſes will do in two or three years; and if on balancing the expences againſt the profits of each crop, are found to be as valuable

in

in themſelves, what are we on compariſon to ſay for artificial graſſes? Very little indeed can be ſaid under the title arable, to induce the farmer to pay much attention to them. But there is yet another method of comparing the relative qualities of winter vegetables and artificial graſs, which, when well conſidered, will conduce very little to the advantage of the latter—the frequent repetition of theſe graſſes can no more be ſupported without winter vegetables or ſummer fallowing, for the corn amongſt which they are to be ſown, than the corn itſelf can; for they exhauſt the land for themſelves, as well as corn exhauſts the land for itſelf;—whereas winter vegetables not only reſtore and prepare the ſoil for corn, in leſs than half the time that graſſes do, but they likewiſe keep improving it for themſelves: and therefore corn and winter vegetables are often repeated for many years upon the ſame piece of land, without any other crop intervening; but corn and graſſes being thus repeated, would ſoon deſtroy the land for both. Thus, while you are reaping one crop of corn, at moſt, in two years, and continually exhauſting your land, I would, with the ſame expence, reap one crop of corn every year, and continually keep my land good. There is ſome land, I am ſenſible, which, on account of its lightneſs, would not abide ſo much ploughing as

for

for this mode of cultivation is neceſſary; but, particular circumſtances and ſituations excepted, this ſoil ſhould be in a ſtate of paſturage;* and, except the caſe of lightneſs in ſoils, it is a miſtaken notion that ploughing exhauſts the land. It is uſing exhauſting crops more in proportion to improving ones; or, it is not manuring and ploughing enough between ſuch exhauſting crops, which exhauſts the land.

PASTURAGE.

AS Arable is appropriated to the production of corn, ſo Paſturage is applied to the production of cattle. Paſturage is of two ſorts;—old ſward, and that produced by artificial graſſes. Of the former it may be obſerved, that the moſt valuable land in the kingdom—that for which tenants can always afford to give the moſt rent, is paſturage; is that, as Mr. Stone properly expreſſes it, "which remains in a ſtate of nature;" which is not diſturbed by the plough, but appropriated excluſively to paſturage. This is the land which ſupplies Smithfield, the Yorkſhire, and all our great markets, ſo plentifully with fat cattle. And what makes it peculiarly valuable is, that it wants

* See Soils.

little

little or no cultivation; the graſs which it produces grows ſpontaneouſly, and on theſe accounts is undoubtedly the moſt valuable plant in the creation.*

This ſort of paſturage requires and admits of very little improvement. Stock it properly, occaſionally mow the thiſtles, and hill and grip it, and the cultivator's work is done. This keeps it in its preſent ſtate.

The reader will eaſily perceive, that I have hitherto ſpoken only of the very beſt ſort of paſturage, that which is applied to fatting cattle; but there is an inferior ſort which is uſed for breeding, and for ſupporting young cattle upon, during the time they are growing, before they are of ſufficient age to begin to fat; and as this land not only admits of improvement, but for the good of the community in many inſtances requires it, we muſt now beſtow a few thoughts upon it.—And here, perhaps, I muſt ſtart ſome

* How is it that botaniſts have hitherto overlooked this plant in their numerous and valuable publications? On compariſon it beggars all artificial graſſes, as intimated before, and indeed all other plants which have or can engage the attention of botaniſts. Perhaps its botanic properties well delineated and diſplayed, might conduce very materially to the advantage of Agriculture.

opinions

opinions which may ſtartle ſome of my readers. Whatever you do in order to improve this land, don't plough it. Ploughing *kills* the natural graſs, and it is yet the beſt plant we have. Now inſtead of killing, encourage it. Encourage it upon this land in the ſame way as you do the feeding. Mow the thiſtles and other weeds occaſionally, and by degrees level its ſurface by cutting the ant-hills; ſtock it properly, and keep it well drained: and if in addition to this management you can at times manure it, you will ſoon perceive, that there is very little land in the kingdom but might in this way, in a few years, be very much improved; and a great deal which is now ſcarcely worth any thing, might thus be made *feeding land of*. How often has my indignation been raiſed at ſeeing that invaluable perennial buried alive, if I may uſe ſuch an expreſſion, for the ſake of introducing a liſt of ſhort-lived exotics, and, compared with it, abſolutely pernicious weeds! All artificial graſſes, and whatever is produced in *conſequence of ploughing*, operate towards natural graſs, no otherwiſe than as weeds, and muſt die or be expelled before natural graſs can again be produced. Almoſt all the land in plough countries which has been laid down two years, exhibits a dead-coloured diſguſting maſk, being covered with white benty graſs, which ſtarves

ſtarves the cattle depaſtured upon it. I appeal to my readers whether this is not the general appearance of paſture land which has been lately laid down, as well as of the cattle confined upon it. —Pray don't miſunderſtand me: I do not attribute this ugly appearance of land and poverty of cattle to its having been lately ſown with graſs ſeeds, but to its having been lately ploughed, by which the natural graſs has been deſtroyed: and when this is done, and the land is to be laid down again, artificial graſſes, though a poor one, are undoubtedly the beſt ſubſtitute; but when they are dead, which is generally the caſe in two years, and before natural graſs takes their place, which is generally many years, the land and cattle, during this interim, look wretchedly indeed.

But here I muſt deſiſt from this part of my ſubject, and revert to an expreſſion which I uſed when ſpeaking of the means I would recommend for the improvement of poor old paſture land. I adviſed "to ſtock it properly." I hate vague and indeterminate language. I hope I ſhall be able to make myſelf underſtood, and therefore think it incumbent upon me to explain in ſome meaſure what I mean by the term—*ſtocking properly*. in that place I meant ſtocking breeding, in the ſame way which you ſtock feeding land;—

that is, don't eat it too bare, which is uſually done. This practice expoſes the roots of the graſs to the froſt in winter, and to the ſcorching heat of the ſun in ſummer; by which a great deal of the natural graſs is killed, and the reſt greatly weakened. This may appear a trifling circumſtance to ſome people, but perhaps it is not ſo in itſelf. Indeed I lay ſuch ſtreſs upon it, as to be well ſatisfied, that if we were to reverſe our modes of ſtocking the two deſcriptions of land, I am perſuaded the quality of the land would ſoon, in a great meaſure, be reverſed too:—that is, ſtock our feeding land as hard and as immethodically as we do our breeding and holding, and it would ſoon be in quality only breeding and holding land; whilſt, on the other hand, the mere circumſtance of ſtocking the breeding land lightly, would ſoon, of itſelf, very materially improve it. Go down into the rich marſhes in Lincolnſhire, and there you may frequently ſee two pieces of land lie immediately ſide by ſide, and in the ſoil of which the niceſt judges can perceive no natural difference; and yet one ſtarves whatever cattle is turned upon it, and the other is at the ſame time fatting ſome of the fineſt oxen, ſheep, and horſes in the kingdom.—From what could this difference ariſe but from the different modes of management? And what difference is there

there in the management but what ariſes from mowing the weeds, cutting the ant-hills, gripping, and laſtly, but chiefly, ſtocking lightly upon the one, whilſt theſe, or the principal of theſe, are reverſed upon the other?

But though ſtocking lightly is generally of ſuch beneficial conſequences to land as well as to cattle, yet there is an exception to it which ought not to be overlooked. Such old ſward as is apt to cover itſelf with a thick white fog, ſhould be eaten very bare, and even folded upon early in the ſpring. As ſoon as young graſs begins to grow up amongſt old fog, the cattle will eat both together; and if this be done early in the ſpring, the land will, by being eaſed, get covered ſoon enough to prevent the bad effects of ſcorching ſuns. The ſame mode of ſtocking ſhould be applied in the before-mentioned interim, to the lands which have lately been laid down; that is, between the death of artificial and the return of natural graſs. Eating the fog off in this way, is like weeding natural graſs, and giving it an opportunity—I had almoſt ſaid an invitation, to grow again, and which, with perſeverance in this practice, it will ſeldom fail to do in a little time.

It may not be improper to conclude the ſubject of Paſturage with a ſhort obſervation or two.

Firſt, The beſt paſture land, that is, the feeding, if ploughed, would be too rich for corn, which would rot, rather than ripen upon the ground.

Secondly, As natural grazing graſs, when once deſtroyed, is many years before it returns upon the ſame piece of land, and as it is ſo very valuable, we ought, if practicable, to contrive a method of cultivating it, and not leave it to the ſlow proceſs of its own ſpontaneity. I doubt whether this plant produces any ſeed, and in this caſe it muſt be cultivated by tranſplanting. I wiſh I could ſee a good botanical deſcription of the plant.

Thirdly, As I have in this Eſſay, as well as in that under the title Arable, repreſented artificial graſſes in an unfavourable point of view, and ſhown where they ought not to be cultivated, it is but right here to ſhow one caſe in which they ought to be uſed. When the price of corn is proportionably and much too low for the price of butchers' meat, land ought to be laid down with artificial graſſes, in order to remove this diſproportion.

Fourthly, For the ſame reaſon I think it right to remark, that though ploughing old ſward is in general

general a moſt pernicious practice, yet when the price of butchers' meat is proportionably too low for corn, this practice ought immediately to be had recourſe to. Yet I muſt take my leave of theſe graſſes by obſerving, that as Paſturage when compared to natural graſs, and as Arable crops, when compared with winter vegetables, though they have ſeveral good qualities, are always very inſignificant; and as in the one caſe old ſward muſt be deſtroyed for their reception, and in the other winter vegetables muſt give way to them; they are generally very injurious both to Paſturage and to Arable.

LIVE CATTLE.

TO begin with Sheep. They are of two ſorts; Lincolnſhire and Leiceſterſhire. The principal objections againſt the former, on compariſon with the latter, appear to be, firſt, that they eat more; conſequently fewer of them can be kept: and, ſecondly, that they require a longer time to bring them to perfection. The objections againſt the Leiceſterſhire, on compariſon with the other, are, that they die in greater numbers, eſpecially when young, being more delicate and unhealthful; and that they afford leſs wool, and of an inferior quality.

lity. So that the good qualities of the Leiceſterſhire are, that they eat leſs food, and are fat one year ſooner than the others; whilſt the Lincolnſhire are more healthy and die leſs, and produce more and better wool. The Lincolnſhire are the beſt in wet and cold ſituations and ſeaſons, eſpecially when young and upon turnips in winter, and alſo when wool fetches a high price:—the Leiceſterſhire, when the price of wool is low and butchers' meat high, and in all warm healthful ſeaſons and ſituations, eſpecially upon graſs in ſummer, after they have been once ſhorn. Which of theſe two deſcriptions of ſheep is beſt upon the whole, is a queſtion not eaſily decided. Perhaps both ought to be promoted. Impartiality, I am perſuaded, would thus determine.

Second.—Horſes are of three ſorts; cart, coach, and ſaddle horſes. Theſe ſorts ought not in general to be mixed, which is, perhaps, too much done. The cart horſes are exceedingly wide and ſolid, and equal to any in the kingdom. The ſaddle horſes are inferior to none, either in ſtrength, ſhape, or action. The coach horſes are chiefly procured from Yorkſhire when three or four years old, and, by drawing the teeth, are made five years old, and ſold to London dealers. This practice is cenſured by Mr. Stone; * becauſe, by

* Page 63.

making

making them one year older than they really are, they are uſed as aged horſes, and thereby deſtroyed when young. He would therefore recommend, that they ſhould be uſed for the purpoſe of Agriculture till ſix or ſeven years old. But what ſort of coach horſes would they make at that age, if uſed till then only for the purpoſes of Agriculture? They would be too ſlow in their paces, and dull in their appearances. To make good coach horſes, they muſt be uſed to the carriage betimes, and muſt not be much uſed in Agriculture. Gentlemen would much rather give thirty-five or forty pounds each for our made five years old, than have them at ſix or ſeven from our carts and ploughs for nought.

That the practice he complains of deſtroys the horſes,—that we are thereby obliged to rear more horſes and fewer of other cattle,—and that the public is thereby injured, is not denied; but this ariſes from the luxury of the great, not from the error of the farmers, who in this buſineſs are only following their own intereſt, at the requiſition of their ſuperiors.

Third.—Oxen. Theſe ſhould be wide in their hips, backs, and boſoms. The beſt feeders have generally long round ribs and ſhort legs, are ſharp and

and bold in their eyes, and have a delicacy in their horns, and indeed in every part and feature, which the harder feeders have not; they poſſeſs likewiſe a peculiar mellowneſs of fleſh, which can beſt be judged of by inſpection and handling.

Fourth.—Pigs. The beſt feeding pigs, like oxen, are wide, plump, and round of carcaſe, light of bone, and have ſhort legs and ſoft hair.

A general obſervation applicable to all animals is, that the peculiar delicacy which diſtinguiſhes the beſt feeders, makes them the tendereſt in conſtitution, and moſt difficult to rear and keep healthful.

WOOD.

THE general directions for pulverizing the ſoils for the ſowing of corn, the weeding of the crop, and the ſuitableneſs of the ſoil to the ſort of corn you mean to ſow, are applicable to the cultivation of Wood. This would have been noticed under the title Soils, which may here be referred to, but that I wiſhed to obſerve, that wood is often wanted by the farmer for hedge-ſtakes, thatch-pricks, hurdles, &c. &c. and as trees

trees whilſt they are growing in hedge-rows injure the quick, and when taken down leave breaks in the hedges, the beſt way is to appropriate corners and waſte pieces of land to the production of wood, and ſet nothing in hedge-rows but quick. However, as I have introduced the ſubject under a ſeparate head, I muſt take the liberty to animadvert upon the idle and ſlovenly method often uſed of making and managing young plantations. A ſort of poſt-hole is dug into the earth, which has never had any preparation, the tender plant is put in, large ſpits of earth are wedged one againſt another upon its roots, and then it is left for years, with graſs and weeds, &c. growing round it higher than itſelf; and ſtill the owner wonders why his young woods don't proſper.—Such practices, or rather neglects, the author has obſerved in more counties than one. Young wood, as intimated above, requires the ſoil to be prepared, and wants weeding like corn; and in gardens, ſhrubberies, &c. where ſuch attention is paid, it generally proſpers; and it cannot reaſonably be expected to proſper in any place without.

QUITTING AND ENTERING UPON FARMS.

THE uſual times for theſe are the beginning and the latter end of the ſummer. I would prefer the ſpring for grazing land, becauſe ground grazed bare (which is uſually the caſe on theſe occaſions) by being eaſed, will *then* be ſooneſt covered again; but at the other end of the year will probably continue bare through the winter, and the roots of the graſs may thereby be injured. The cattle likewiſe, which by the bareneſs of paſtures are injured, will ſooner be reſtored in ſpring than autumn.—Meadow land ſhould at lateſt be quitted about Old Lady-day.

But on plough land there are more evils to avoid. If you enter at ſpring, the ſeed time is over before you are prepared for it; if in autumn, you have all your ſtubbles to fallow, and have no winter food for your teams. To avoid theſe inconveniencies, each tenant ſhould be under an obligation, 1ſt, To quit to his ſucceſſor ſome portion of his ſtubbles, as ſoon as he ſhall have gathered his laſt crop, and the reſt in ſucceſſion as the in-coming tenant may want to plough it.—2d, To quit all his turnip, cabbage, &c. land, as faſt as theſe crops are eaten off; and to have it all cleared

cleared by a week or a fortnight after Old Lady-day. 3d, When this in-coming tenant may chooſe to bring his teams to prepare his land, his predeceſſor ſhould likewiſe be under an obligation to quit to him certain buildings, crews, or paſtures, &c. and to ſell him, at a price to be ſettled by people mutually choſen by the tenants, corn, hay, ſtraw, &c. for the accommodation of his teams.—No hay or ſtraw ſhould be taken off the farm.

It is inconvenient in ſome countries to move families till the roads are good in ſpring, which is the chief cauſe of the houſe, buildings, and home-lands often being in dirty countries May-day, whilſt the reſt of the farm is Lady-day land.

All theſe circumſtances about quitting, and every other which may occur, ſhould be ſettled with every tenant on his entering.

SEA PORTS.

IT is obſerved by Mr. Stone,* that "Upon the coaſt, between the port of Boſton and the Humber, it may be conſidered adviſeable, upon a proper inveſtigation of the ſubject, to make a

* Page 90.

port, for the promotion of trade and commerce." Wainfleet Haven is in a centrical ſituation, and is perhaps as ſafe a harbour for ſhips as any in the kingdom; it might therefore be a very proper place for the port thus hinted at by Mr. Stone.

VICTUALLING OFFICE.

IN the page laſt alluded to, Mr. Stone ſays, "And, probably, if a Victualling Office were to be eſtabliſhed at Boſton, for curing beef and pork for his Majeſty's ſervice, it may be conſidered very expedient; becauſe near ten *per cent.* is loſt in the expence of driving cattle, &c. from the adjacent country to the London market, and the cattle thereby heated, and rendered leſs deſirable for the purpoſes required: from which circumſtance, if the meaſure I have pointed out were to be adopted, the buſineſs of ſlaughtering and ſalting might here be carried on a month later in the ſeaſon than at Deptford."—I have quoted this and the foregoing obſervation on Ports, becauſe I think they cannot be too generally known and conſidered, and the objects of them too ſpeedily adopted.

MANU-

MANUFACTORY.

A Woollen, and perhaps other Manufactories, might be erected at one or both of the aforementioned places; and I ſhould not think Gainſborough an unlikely place for ſimilar improvements. The Lincolnſhire wool is carried to the Yorkſhire, Norfolk, and Suffolk, &c. markets, there being at preſent no market or manufactory worth mentioning within the county. I believe want of coals is the chief cauſe of this.—Theſe improvements would create markets for fiſh, the productions of the dairy, &c. and notwithſtanding what Mr. Stone ſays on this head, the want of markets is the chief reaſon ſuch things are ſo little cultivated in Lincolnſhire. They would likewiſe facilitate the improvement of the roads, by increaſing the tolls that would then ariſe from an increaſe of travelling, which would no doubt ſoon take place; and the preſent bad roads are a great diſadvantage to the county. An increaſe of trade would naturally increaſe riches and population.

AGRICULTURAL SOCIETIES.

THUS far the reader has had what the author conceives to be the beſt means for improving the ſcience

ſcience upon which he writes. Whether any of his ideas may appear new to the reader, is of little conſequence: the far more important conſiderations are, whether they are juſt; and, if juſt, whether practicable. And here I muſt beg leave to aſk, who is competent to decide theſe queſtions? Not the author, for he can only reaſſert and reinforce his own opinions. Then ſhall we ſay the reader? He is but a fallible individual like the author. The Board of Agriculture? Perhaps it might with truth be ſaid they know little of Agriculture but by hearſay; and beſides, having no legiſlative capacity, cannot finally determine. Why then ſay the Government. The Government can undoubtedly give effect to their *will*, but they are not farmers; and certainly I mean them no diſreſpect when I add, they are not competent judges to determine the fate of the ſcience with any good proſpect of ſucceſs. Then who is to determine; and, where any alteration may be deemed neceſſary, to carry that determination into effect? Form Agricultural Societies in every part of the kingdom: a general one for each county, and under theſe, ſubordinate ones. A Society for the improvement of Drainage and Roads, another for the Wolds, another for the Lower Marſhes, another for the Fens, another to improve the condition of the Labourers and Poor; fewer

fewer or more of theſe as the ſituation of each county may require. Theſe ſubordinate ſocieties to correſpond with the general one of each county. Then let the determinations or reſolutions of theſe general ſocieties be collected, arranged, and laid before Parliament by the Society of Agriculture already eſtabliſhed. And thus Government will get all the information, and the beſt information the nature of the caſe will poſſibly admit of; and *then* they will be able judiciouſly to regulate Agriculture, and with a good degree of certainty to make laws for the public good.

FINIS.

MVSEVM
BRITAN
NICVM